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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/598,068	06/20/2000	Vincent K. Jones IV	CISC646	5487

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EXAMINER

JAGANNATHAN, MELANIE

ART UNIT PAPER NUMBER

2666

DATE MAILED: 03/02/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/598,068

Applicant(s)

JONES ET AL.

Examiner

Melanie Jagannathan

Art Unit

2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5.6.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Schmidl et al. US 5,732,113.

Regarding claims 1, 4-6, 9-10, 13-15 and 18-19, the claimed second node receiving a series of frequency domain bursts from first node, frequency domain bursts including training symbols is disclosed by OFDM transmitter sending RF OFDM modulated carrier to an OFDM receiver in a remote location. See columns 1-3. Synchronization of a receiver to an OFDM signal relies on the use of two OFDM training symbols repeated every certain interval. See column 11, lines 59-67 and column 12. The claimed measuring interburst phase differences and determining wide frequency offset is disclosed by estimation of phase difference and using computations of samples from training symbols computing the carrier frequency offset. See column 17, lines 40-66 and columns 12 and 13.

Regarding claims 2, 11, 20, the claimed training symbols used to estimate channel response is disclosed by for timing and frequency synchronization of receiver to OFDM signal relies on training sequence within a frame composed of training symbols as part of OFDM receiver's attempt to acquire signal from transmitter. See column 11, lines 59-67 and column 12, lines 1-38. Regarding claims 3, 8, 12, 17, 21, the claimed determining system configuration

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information based on interburst phase differences is disclosed by training symbols containing phase information that teaches the idea of receiver establishing system configuration through the use of phase information in the training symbols as disclosed in page 9 of specification. See columns 11-13.

Regarding claims 7, 16, the claimed converting frequency domain bursts to time domain bursts is disclosed by IFFT performed on OFDM frequency domain symbols to produce time domain OFDM symbols. See column 2, lines 1-40.

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Halbert-Lassalle et al. Re. 36,430 disclose device for transmission of digital data with at least two levels of protection.

Michon et al. US 6,282,167 disclose OFDM signal organized so as to simplify reception.

Helard et al. US 5,274,629 disclose method for broadcasting digital data towards mobile receivers with time-frequency interlacing and coherent demodulation.

Schmidl et al. US 6,546,055 disclose carrier-offset determination for RF signals having a cyclic prefix.

Huber et al. US 6,618,452 disclose burst carrier frequency synchronization and iterative frequency domain frame synchronization for OFDM.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie Jagannathan whose telephone number is 703-305-8078.


The examiner can normally be reached on Monday-Friday from 8:00 a.m.-4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 703-308-5463. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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MJ



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